predicted from a nucleotide sequence encoding a human brain-derived protein of the present invention obtained in Example 3 (a sequence represented by HH02631 in the figure).--

On page 13, line 11 to page 14, line 21, please DELETE description of Figs. 17 to 20 inclusive.

On page 14 lines 22-23 please substitute the following paragraph for the existing paragraph:

--Figs. 21 to 24 show a nucleotide sequence (SEQ ID NO.: 9) contained in plasmid pHH02631 obtained in Example 3.--

On page 14, line 24 to page 15, line 4, please DELETE description of Figs. 22 to 24 inclusive.

A MARK-UP of the Specification pages showing the requested changes is attached hereto.

REMARKS

1. Amendment to Specification

Applicants have requested the amendment to the specification in order to enter the newly submitted Substitute Sequence Listing in place of the Sequence Listing as filed.

Amendment is requested to insert reference to SEQ ID NOs in the appropriate location in the specification, as well as to more concisely describe the figures as originally filed.

The Substitute Sequence Listing further includes sequence information that corresponds to the nucleic acid sequences depicted in Figures 1 and 2; Figures 7-15; and Figures 21-24 of the application as originally filed.

2. Substitute Sequence Listing/CRF

Applicants herewith respectfully submit a substitute Sequence Listing and CRF of the same sequence listing. The CRF is in IBM PC/AT DOS Text format as file "2534seq.txt".

Applicants wish to point out that they were NOT provided with a RAW SEQUENCE LISTING REPORT from which to ascertain the asserted defects in the original Sequence Listing as submitted.

The Substitute Sequence Listing and the CRF herewith submitted are identical in content and contain no new matter, and this sequence information contained is described in the application as originally filed.

3. Executed Declaration/Power of Attorney

Applicants herewith respectfully submit a true and correct copy of the executed declaration of the inventors as originally filed with the Application on January 22, 2001.

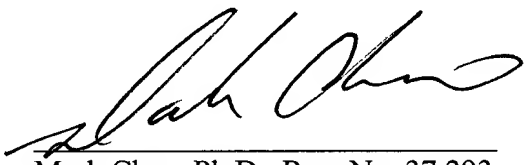
Also enclosed is a copy of the Certificate of Express Mailing (37 CFR 1.10) listing the Executed Declaration/Power of Attorney and a copy of the Return Receipt Postcard itemizing the Declaration (4 pgs) as submitted and stamped as received by the USPTO.

Conclusion

The Commissioner is authorized to charge the appropriate surcharge fees, and to credit any overpayment to our USPTO deposit account number 500799 for customer No. 23,115. Early allowance of the claims is requested. Should the Examiner believe that a conference with applicants' attorney would advance prosecution of this application, the Examiner is respectfully invited to call applicants' attorney.

Respectfully submitted,

Dated: November 19, 2001



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MARK-UP

(36) A pharmaceutical which comprises a compound which alters property of a ligand binding with the protein or a salt thereof according to the above item (1), which is obtainable by the kit for screening according to the above item (32) to (34), or a salt thereof,

(37) A method for quantitating the protein according to the above item (1), the partial peptide according to the above item (2) or a salt thereof, which comprises contacting the antibody according to the above item (8) with the protein according to the above item (1), the partial peptide according to the above item (2) or a salt thereof,

(38) A method for quantitating the protein according to the above item (1), the partial peptide according to the above item (2) or a salt thereof in a specimen solution, which comprises competitively reacting the antibody according to the above item (8) with the test solution and the labeled protein according to the above item (1), the partial peptide according to the above item (2) or a salt thereof, and determining a ratio of the protein according to the above item (1), the partial peptide according to the above item (2) or a salt thereof which is bound to the antibody,

(39) A method for quantitating the protein according to the above item (1), the partial peptide according to the above item (2) or a salt thereof in a specimen solution, which comprises reacting the specimen solution with the antibody according to the above item (8) and the labeled antibody according to the above item (8) which is unsolubilized on a carrier simultaneously or successively, and determining the activity of a labeling agent on the unsolubilized carrier.

Brief Description of the Drawings

Figs. 1 and 2 show ~~Fig. 1 shows~~ a nucleotide sequence (SEQ ID NO.:7) encoding a human brain-derived protein of the present invention obtained in Example 1 and an amino acid sequence predicted (SEQ ID NO.:1)

therefrom ~~(continued to Fig. 2)~~

~~Fig. 2 shows a nucleotide sequence encoding a human brain-derived protein of the present invention obtained in Example 1 and an amino acid sequence predicted therefrom (continued from Fig. 1).~~

Fig. 3 shows a hydrophobic plot of a human brain-derived protein of the present invention, which was made based on the amino acid sequences shown in Fig. 1 and Fig. 2. Parts designated by 1 - 7 show a hydrophobic domain.

Figs. 4 and 5 show ~~Fig. 4 shows~~ an amino acid sequence (SEQ ID NO: 1) predicted from a nucleotide sequence encoding a human brain-derived protein of the present invention obtained in Example 1 (a sequence represented by HK05006 in the figure) and an amino acid sequence (SEQ ID NO: 3) predicted from a nucleotide sequence encoding a human brain-derived protein of the present invention obtained in Example 2 (a sequence represented by HK05490 in the figure) ~~(continued to Fig. 5)~~

~~Fig. 5 shows an amino acid sequence predicted from a nucleotide sequence encoding a human brain-derived protein of the present invention obtained in Example 1 (a sequence represented by HK05006 in the figure) and an amino acid sequence predicted from a nucleotide sequence encoding a human brain-derived protein of the present invention obtained in Example 2 (a sequence represented by HK05490 in the figure)(continued from Fig. 4).~~

Fig. 6 shows a hydrophobic plot of a human brain-derived protein of the present invention, which was made based on the amino acid sequence predicted based on a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 2. Part designated by 1 - 7 show a hydrophobic domain.

Figs. 7 to 15 show ~~Fig. 7 shows~~ a nucleotide sequence (SEQ ID NO: 8) of a DNA encoding a human brain-

derived protein of the present invention obtained in Example 2, and an amino acid sequence (SEQ ID NO: 3) predicted therefrom ~~(continued to Fig. 8)~~.

~~Fig. 8 shows a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 2, and an amino acid sequence predicted therefrom (continued from Fig. 7 and continued to Fig. 9).~~

~~Fig. 9 shows a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 2, and an amino acid sequence predicted therefrom (continued from Fig. 8 and continued to Fig. 10).~~

~~Fig. 10 shows a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 2, and an amino acid sequence predicted therefrom (continued from Fig. 9 and continued to Fig. 11).~~

~~Fig. 11 shows a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 2, and an amino acid sequence predicted therefrom (continued from Fig. 10 and continued to Fig. 12).~~

~~Fig. 12 shows a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 2, and an amino acid sequence predicted therefrom (continued from Fig. 11 and continued to Fig. 13).~~

~~Fig. 13 shows a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 2, and an amino acid sequence predicted therefrom (continued from Fig. 12 and continued to Fig. 14).~~

~~Fig. 14 shows a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 2, and an amino acid sequence predicted therefrom (continued from Fig. 13 and continued to Fig. 15).~~

~~Fig. 15 shows a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 2, and an amino acid~~

~~sequence predicted therefrom (continued from Fig. 14).~~

Figs. 16 to 20 show ~~Fig. 16 shows~~ an amino acid sequence (SEQ ID NO.: 1) predicted from a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 1 (a sequence represented by HK05006 in the figure), an amino acid sequence (SEQ ID NO.: 3) predicted from a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 2 (a sequence represented by HK05490 in the figure) and an amino acid sequence (SEQ ID NO.: 5) predicted from a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 3 (a sequence represented by HH02631 in figure) ~~(continued to Fig.17)~~.

~~Fig. 17 shows an amino acid sequence predicted from a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 1 (a sequence represented by HK05006 in the figure), an amino acid sequence predicted from a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 2 (a sequence represented by HK05490 in the figure) and an amino acid sequence predicted from a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 3 (a sequence represented by HH02631 in the figure)(continued to Fig.18).~~

~~Fig. 18 shows an amino acid sequence predicted from a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 1 (a sequence represented by HK05006 in the figure), an amino acid sequence predicted from a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 2 (a sequence represented by HK05490 in the figure) and an amino acid sequence predicted from a~~

~~nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 3 (a sequence represented by HH02631 in the figure)(continued to Fig.19).~~

~~Fig. 19 shows an amino acid sequence predicted from a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 1 (a sequence represented by HK05006 in the figure), an amino acid sequence predicted from a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 2 (a sequence represented by HK05490 in the figure) and an amino acid sequence predicted from a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 3 (a sequence represented by HH02631 in the figure)(continued to Fig.20).~~

~~Fig. 20 shows an amino acid sequence predicted from a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 1 (a sequence represented by HK05006 in the figure), an amino acid sequence predicted from a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 2 (a sequence represented by HK05490 in the figure) and an amino acid sequence predicted from a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 3 (a sequence represented by HH02631 in the figure)(continued from Fig.19).~~

Figs. 21 to 24 show ~~Fig. 21 shows~~ a nucleotide sequence (SEQ ID NO.: 9) contained in the plasmid pHH02631 obtained in Example 3 ~~(continued to Fig. 22)~~.

~~Fig. 22 shows a nucleotide sequence contained in the plasmid pHH02631 obtained in Example 3 (continued to Fig. 23).~~

~~Fig. 23 shows a nucleotide sequence contained in the plasmid pHH02631 obtained in Example 3 (continued to Fig. 24).~~

~~Fig. 24 shows a nucleotide sequence contained in the plasmid pHH02631 obtained in Example 3 (continued from Fig. 23).~~

Fig. 25 shows a hydrophobic plot of a human brain-derived protein of the present invention, which was made based on an amino acid sequence predicted from a nucleotide sequence of a DNA encoding a human brain-derived protein of the present invention obtained in Example 3. Parts designated by 1 - 7 show a hydrophobic domain.

Best Mode for Carrying Out the Invention

A protein of the present invention (G protein-coupled receptor protein) is a receptor protein containing the same or substantially the same amino acid sequence as amino acid sequence represented by SEQ ID No.:1 [amino acid sequence of Fig. 1 and Fig. 2], an amino acid sequence represented by SEQ ID No.:3 [amino acid sequence represented by HK05490 in Fig.4 and Fig. 5;an amino acid sequence in Fig.7 to Fig. 15] or an amino acid sequence represented by SEQ ID No.:5 [amino acid sequence represented by HH02631 Fig.16 to Fig.20] (hereinafter a protein of the present invention (G protein-coupled receptor protein) or a salt thereof is abbreviated as present protein in some cases)))).

Present protein (G protein conjugated type protein) may be derived from, for example, in cases of human being and mammal (for example, guinea pig, rat, mouse, rabbit, pig, sheep, cow, monkey and the like), any cell (for example, spleen cell, nerve cell, glia cell, pancreatic β cell, marrow cell, mesangial cell, Langerhans's cell, epidermic cell, epithelial cell, endothelial cell, fibroblast, fibrocyte, myocyte, fat cell,